

Lead PI: Nitash Balsara

Program: Soft Matter Electron Microscopy

Publications intellectually led by Soft Matter EM:

1. "Effect of Crystallization on Proton Transport in Model Polymer Electrolyte Membranes", K.M. Beers, D.T. Wong, A.J. Jackson, X. Wang, J.A. Pople, **A. Hexemer**, and **N.P. Balsara**, *Macromolecules* 47 (13), 4330-4336, **2014**. DOI: 10.1021/ma500298w.
2. "Molecular Anisotropy Effects in Carbon *K*-edge Scattering: Depolarized Diffuse Scattering and Optical Anisotropy", K. H. Stone and **J. B. Kortright**, *Physical Review B*, 90 (10), p. 104201-(1-12), **2014**.
3. "Effect of Morphology of Nanoscale Hydrated Channels on Proton Conductivity in Block Copolymer Electrolyte Membranes", X.C. Chen, D.T. Wong, S. Yakovlev, K.M. Beers, **K.H. Downing**, **N. P. Balsara**, *Nano Letters* vol.14, pp 4058–4064, **2014**. DOI: 10.1021/nl501537p.
4. "Absence of Schroeder's Paradox in a Nanostructured Block Copolymer Electrolyte Membrane", K. M. Beers, S. Yakovlev, A. Jackson, X. Wang, **A. Hexemer**, **K. H. Downing**, and **N.P. Balsara**, *The Journal of Physical Chemistry B* vol. 118 (24), 6785-6791, **2014**. DOI: 10.1021/jp501374r.
5. "Crystallization in Sequence-Defined Peptoid Diblock Copolymers Induced by Microphase Separation", J. Sun, A.A. Teran, X. Liao, **N.P. Balsara**, **R.N. Zuckermann**, *Journal of the American Chemical Society* vol. 136, pp 2070–2077, **2014**. DOI: 10.1021/ja412123y.
6. "Insights on the Study of Nafion Nanoscale Morphology by Transmission Electron Microscopy", S. Yakovlev, **N.P. Balsara**, **K.H. Downing**, *Membranes (An Open Access Journal)* vol. 3, p. 424-439, **2013**. DOI: 10.3390/membranes3040424.
7. "Detection of Subsurface Structures Underneath Dendrites formed on Cycled Lithium Metal Electrodes", K.J. Harry, D.T. Hallinan, D.Y. Parkinson, **A.A. MacDowell**, **N.P. Balsara**, *Nature Materials* vol. 13, p. 69-73, **2014**. DOI: 10.1038/nmat3793.

Collaborative Publications:

1. "Effect of Grain Size on the Ionic Conductivity of a Block Copolymer Electrolyte", M. Chintapalli, X.C. Chen, J.L. Thelen, A.A. Teran, X. Wang, B.A. Garetz, and [N.P. Balsara](#), *Macromolecules* 47 (15), 5424-5431, **2014**. DOI: 10.1021/ma501202c.
2. "Morphology–Conductivity Relationship of Single-Ion-Conducting Block Copolymer Electrolytes for Lithium Batteries", S. Inceoglu, A.A. Rojas, D. Devaux, X.C. Chen, G.M. Stone, and [N.P. Balsara](#), *ACS Macro Letters* 3 (6), 510-514, **2014**. DOI: 10.1021/mz5001948.
3. "Development and Validation of Endovascular Chemotherapy Filter Device for Removing High-Dose Doxorubicin: Preclinical Study", A.S. Patel, M. Saeed, E.J. Yee, J. Yang, G.J. Lam, A.D. Losey, P.V. Lillaney, B. Thorne, A.K. Chin, S. Malik, M.W. Wilson, X.C. Chen, [N.P. Balsara](#) and S.W. Hetts, *Journal of Medical Devices* 8(4), 041008, **2014**. DOI: 10.1115/1.4027444.